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EXAMINER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/644,261	<b>Applicant(s)</b> ANSARI ET AL.	
	<b>Examiner</b> PRITHAM PRABHAKHER	<b>Art Unit</b> 2622	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11, 12, 14, 15, 17-19, 21, 23, 25-29 and 31-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12, 14, 15, 17-19, 21, 23, 25-29 and 31-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/03/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments with respect to claims 1-9, 11-12, 14-15, 17-19, 21, 23, 25-29 and 31-38 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 11, 14 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US Patent No.: 7425984B2).**

*Regarding **Claim 11**, Chen et al. disclose an image capturing system (Figure 2, Column 9, Lines 38 et seq.) comprising:*

*an integrated circuit (integrated circuit chip 299 in Figure 2) comprising:*

*a first image module (210a is an image sensor, **Figure 2 and Column 5, Lines 1 et seq.**) communicatively coupled to a processing engine (processing engine 270 in Figure 2), the first image module operable to capture first image information (Each*

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*image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq.**), wherein the first image module does not include a computer readable memory (There is no memory in the first image sensor);*

*a second image module (210b is an image sensor, **Figure 2 and Column 5, Lines 1 et seq.**) communicatively coupled to the processing engine (processing engine 270 in Figure 2), the second image module operable to capture second image information (Each image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq.**); and*

*the processing engine operable to perform an image processing function on information received from the first image module and the second image module (Video processor 270 is capable of performing an image processing function on information attained from the first and second image sensors, **Figure 2 and Column 5, Lines 11-14; Column 8, Lines 1 et seq.**).*

*With regard to **Claim 14**, Chen et al. disclose the system of claim 11, further comprising a selection mechanism operable to switch the information received by the processing engine from the first image information to the second image information (There is a selector present in the processor 270 that selects groups of pixels from each of the components of images attained by the individual cameras by switching from one camera to the next, **Column 5, Lines 1 et seq.; Column 8, Lines 51-59**).*

*Regarding **Claim 21**, Chen et al. disclose the system of claim 11, wherein the first image information represents a first view of a scene and the second image information represents a second view of the scene and wherein at least a portion of the first information represents a portion of the scene captured in the second view (**Column 9, Lines 39 et seq.**).*

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 12, 15, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) as applied to claim 11 above.**

*With regard to **Claim 12**, Chen et al. disclose the system of claim 11, further comprising:*

*a third image module (210c in Figure 2) communicatively coupled to the processing engine (Each image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq. of Chen et al.**; and*

*an interface operable to facilitate communication to a computing device (**Figures 1-2 and Column 4, Line 32 to Column 5, Line 58 of Chen et al.**).*

*However, Chen et al. do not disclose the communication of the processing engine output to a computing device. Official notice is taken by the examiner on transferring the processing engine information from the integrated circuit chip disclosed by Chen et al. to an external computing device. It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to transfer the output of the processing engine to an external computing system, because this would have enabled the freeing up of space in the integrated circuit and increasing its present memory capacity.*

*In regard to **Claim 15**, Chen et al. do not explicitly disclose the system of claim 11, wherein the processing engine is operable to simultaneously perform an image processing function on information received from the first image module and the second image module. Official notice is taken by the examiner on simultaneously performing the image processing function on information received from the first image module and the second image module. It would have been obvious and well known to one of ordinary*

*skill in the art at the time of the invention to perform simultaneous processing on the first and second images from the first and second image modules, because this is an accurate and well known method of generating one image from multiple image sensors.*

*Regarding **Claim 19**, Chen et al. do not disclose the system of claim 11, wherein the first image module comprises an optical zoom lens with autofocus. Official notice is taken by the examiner stating that it would have been obvious and well known at the time of the invention to have a lens that performed optical zoom with auto-focus. Having an optical zoom would have been better and more powerful than having a digital zoom and having the lens perform an auto-focus function would have saved the user the time and effort of manually focusing in on a scene to be imaged.*

**Claims 17-18 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) as applied to claim 11 above and further in view of Foote et al. (US Patent No.: 7015954B1)**

*In regard to **Claim 17**, Chen et al. disclose multiple cameras (Figure 2 of Chen et al.) that have different views (Column 9, Lines 39 et seq. of Chen et al.). However, Chen et al. do not explicitly disclose the system of claim 11, wherein the first image module has a resolution and the second module has a different resolution. Foote et al. disclose two different cameras (Ch1 and Ch2 from Figure 10 of Foote et al.). Before merging the*

*images from Ch1 and Ch2, it is taught that the regions from Ch1 corresponding to the regions in Ch2 differ in resolution (the regions are darker in Ch1), **Column 11, Lines 41-47 of Foote et al.** It would have been obvious to one of ordinary skill in the art at the time of the invention to have one sensor differ in resolution when compared to the other sensor, because each sensor captures a different scene of view and the light falling on each portion of the scene of view could vary.*

*Regarding **Claim 18**, Chen et al. do not explicitly disclose that the system of claim 11, wherein the first image module comprises a digital zoom lens. Foote et al. disclose that digital zooming of a scene is possible with an array of cameras, **Column 1, Lines 26-30 of Foote et al.** It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate digital zooming taught by Foote et al. into the imaging system structure disclosed by Chen et al., because digital zooming increases the size of the image to be captured and renders the image easier to view.*

*In regard to **Claim 32**, Chen et al. disclose an image capturing method comprising:*

*receiving image data from a plurality of image sensors (Figure 2 and **Column 5, Lines 1 et seq.**), wherein an integrated circuit comprises a processing engine and at least one of the plurality of image sensors (The image sensors and processor 270 are mounted on the same integrated circuit chip 299, **Column 5, Lines 18-20**),*



*wherein none of the plurality of image sensors includes a computer readable memory (None of the image sensors include a computer readable memory);*

*selectively providing image data related to one or more of the plurality of image sensors to the processing engine (The video processor 270 generates the final image from the plurality of virtual images attained using individual cameras that capture an image at different depths, **Column 8, Lines 1 et seq. of Chen et al.**);*

*Although Chen et al. disclose processing the image data, the reference does not explicitly disclose processing the image data to produce an output and transmitting the output to a video conference device. Foote et al. teach of receiving image data from a plurality of image sensors (Image data is received from the array of cameras (plurality of image sensors) 1510 in **Figure 15 of Foote et al.**), and selectively providing image data related to one or more of the plurality of image sensors to the processing engine (The image data from 1510 is provided to the processing engine 1530 which combines the images, **Figure 15 and Column 18, Lines 9 et seq. of Foote et al.**). Foote et al. then disclose processing the image data to produce an output (The image data is combined (processed) in 1530 and sent to the output 1570, **Figure 15 and Column 18, Lines 9 et seq. of Foote et al.**). Finally, Foote et al. disclose transmitting the output to a video conferencing device (The output 1570 can be used as a video conferencing (teleconferencing) device, **Figure 155 and Column 1, Lines 33-45 of Foote et al.**). It would have been obvious to one of ordinary skill in the art at the time of the invention to*

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*output the processed data to a video conferencing device since this is a well known way of sharing images to a particular audience of choice.*

*With regard to **Claim 33**, Chen et al. and Foote et al. disclose the method of claim 32, further comprising:*

*receiving an audio signal via a directional microphone (The cameras can be controlled using a microphone/audio assembly, **Column 15, Lines 1 et seq. of Foote et al.**); and*

*selectively providing image data associated with a particular image sensor of the plurality of image sensors to the processing engine based on a direction associated with the audio signal (The cameras can be controlled using a microphone/audio assembly. Images can be tracked according to their audio output and combined in the processing engine, **Column 15, Lines 1 et seq. and Column 16, Lines 1-26 of Foote et al.**).*

*It would have been obvious to one of ordinary skill in the art at the time of the invention to have an imaging system receive an audio signal via a microphone and selectively provide image data associated with an image sensor to the processing engine based on a direction associated with the audio signal, because tracking an object by detection of an audio signal is a well known method of steering a camera to capture an image, **Column 4, Lines 4-16 of Foote et al.***

**Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) as applied to claim 11 above and further in view of Webster (US Patent No.: 6791076B2)**

*Chen et al. do not teach or explicitly disclose the image capturing system of claim 11, wherein the first image module comprises a lens integrated with the sensor. Webster discloses a lens integrated with an image sensor, **Column 5, Lines 7-12 of Webster**. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate lens' that were integral with the image sensors disclosed by Chen et al., because prevents the lens assembly from moving relative to the image sensor and causing defocusing, **Column 5, Lines 7-12 of Webster**.*

**Claims 1, 3-6, 23, 25-27, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) and further in view of Webster (US Patent No.: 6791076B2)**

*In regard to **Claim 1**, Chen et al. disclose an image capture system (Figure 2, **Column 9, Lines 38 et seq.**) comprising:*

*a processing engine (video processor 270) operable to perform an image processing function (Video processor 270 is capable of performing an image processing function, **Figure 2 and Column 5, Lines 11-14**);*

*a first image sensor lens module comprising a first sensor (210a is an image sensor, **Figure 2 and Column 5, Lines 1 et seq.**), the*

*first image sensor lens module (210a) operable to capture a first view of a scene and to output first information representing the first view (Each image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq.**);*

*a second image sensor lens module (210b) operable to capture a second view of the scene and to output second information representing the second view (Each image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq.**);*

*a selector operable to selectively route at least a portion of scene view information to the processing engine (There is a selector present in the processor 270 that selects groups of pixels from each of the components of images attained by the cameras, **Column 8, Lines 51-59**), the scene view information comprising the first information and the second information (**Column 5, Lines 1 et seq.**); and*

*a mounting surface on which the processing engine (270), the first image sensor lens module (210a) and the second image sensor lens module (210b) are secured (The image sensors and processor 270 are mounted on the same integrated circuit chip 299, **Column 5, Lines 18-20**).*

*Although Chen et al. disclose the different image sensors, the reference does not teach or explicitly disclose that there are lenses integral with the image sensors.*

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*Webster discloses a lens integrated with an image sensor, **Column 5, Lines 7-12 of Webster**. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate lens' that were integral with the image sensors disclosed by Chen et al., because prevents the lens assembly from moving relative to the image sensor and causing defocusing, **Column 5, Lines 7-12 of Webster**.*

*Regarding **Claim 3**, Chen et al. and Webster disclose the system of claim 1, further comprising:*

*a third image sensor lens module (210c in Figure 2 of Chen et al.) operable to capture a third view of the scene (Each image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq. of Chen et al.**); and*

*an integrated circuit comprising the first image sensor lens module, the second image sensor lens module, the third image sensor lens module and the processing engine (The image sensors and processor 270 are mounted on the same integrated circuit chip 299, **Column 5, Lines 18-20 of Chen et al.**).*

*Regarding **Claim 4**, Chen et al. and Webster disclose the system of claim 1, wherein the first and second image sensor lens modules are adjustably secured to the mounting surface. Webster discloses that the lens can be readily adjusted relative to the image sensor by rotating a lens support (Abstract of Webster). It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to*

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*have the lens' adjustably secured with the mounting surface, because this readily allows focusing of radiation on the active area of the image sensor, **Column 4, Lines 64 et seq. of Webster.***

*With regard to **Claim 5**, Chen et al. and Webster disclose the system of claim 1, further comprising a triggering engine (There is a triggering engine present in the video processor 270) operable to evaluate scene view information to identify an image sensor module capturing desired information (Each camera can evaluate a different depth plane and the processor 270 identifies which camera is performing a specific function and acquiring specific information, **Figure 4 to 5B; Column 8, Lines 1 et seq. of Chen et al.**) and signal the selector to route selected scene view information captured by the identified image sensor module to the processing engine (The video processor 270 generates the final image from the plurality of virtual images attained using individual cameras that capture an image at different depths, **Column 8, Lines 1 et seq. of Chen et al.**).*

*In regard to **Claim 6**, Chen et al. and Webster do not explicitly disclose the system of claim 1, further comprising a microphone assembly communicatively coupled to the processing engine to provide audio input. Official notice is taken by the examiner in providing a microphone assembly communicatively coupled to the processing engine to provide audio input. It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to provide audio output to go along with the*

*capturing of images, because it is a means of communicating a message to a user about the captured image and this improves the users ability to relate to the image.*

*With regard to **Claim 23**, Chen et al. disclose an image capturing method comprising:*

*correlating a plurality of digital image sensors with different views of a scene wherein at least one of the plurality of digital image sensors comprise a lens (Each image sensor is its own camera capable of capturing a view of a scene and outputting the first view to the processor 270, **Figure 2 and Column 5, Lines 1 et seq., Column 9, Lines 39 et seq.**),*

*receiving information that represents a first view of the scene (210a is used to capture a first view of a scene, **Figure 2**);*

*receiving additional information that represents a second view of a scene (210a is used to capture a first view of a scene, **Figure 2**);*

*determining that the first view of the scene comprises a desired portion of the scene (Column 5, Lines 1 et seq.); and*

*allowing the information to progress to the processing engine (The video processor 270 generates the final image from the plurality of virtual images attained using individual cameras that capture an image at different depths, **Column 8, Lines 1 et seq. of Chen et al.**).*

*Although Chen et al. disclose the different image sensors, the reference does not teach or explicitly disclose that there are lenses integral with the image sensors.*

*Webster discloses a lens integrated with an image sensor, **Column 5, Lines 7-12 of Webster**. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate lens' that were integral with the image sensors disclosed by Chen et al., because prevents the lens assembly from moving relative to the image sensor and causing defocusing, **Column 5, Lines 7-12 of Webster**.*

*In regard to **Claim 25**, Chen et al. and Webster disclose the method of claim 23, further comprising performing an image signal processing function on the information (Video processor 270 is capable of performing an image processing function, **Figure 2 and Column 5, Lines 11-14 of Chen et al.**).*

*In regard to **Claim 26**, Chen et al. and Webster disclose the method of claim 23, further comprising performing an image signal processing function on the information (Video processor 270 is capable of performing an image processing function, **Figure 2 and Column 5, Lines 11-14 of Chen et al.**).*

*However, Chen et al. and Webster do not explicitly disclose initiating presentation of the information on a display after performing the image signal processing function. Official notice is taken by the examiner on displaying the information after performing the image signal processing function. It would have been*



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*obvious and well-known to one of ordinary skill in the art at the time of the invention to display the information after performing the image signal processing function, because this would enable a user to view the captured and synthesized images.*

*Regarding **Claim 27**, Chen et al. and Webster disclose the method of claim 23, further comprising:*

*determining that the second view of the scene comprises another desired portion of the scene (The second view of the scene can be captured by image capturing device 210b and comprises another portion of the scene, **Column 5, Lines 1 et seq.; Column 9, Lines 39 et seq. of Chen et al.**); and*

*allowing the additional information to progress to the processing engine (**Column 8, Lines 51-59; Column 9, Lines 39 et seq. of Chen et al.**).*

*Regarding **Claim 35**, Chen et al. and Webster disclose the image capture system of claim 1, wherein the first image sensor lens module does not include a computer readable memory (Figure 2 of Chen et al. shows no memory present on the lens modules).*

*In regard to **Claim 36**, Chen et al. and Webster disclose the image capture system of claim 1, wherein there is no optical component spatially situated between the first lens and first sensor (Webster discloses a lens integrated with an image sensor, **Column 5, Lines 7-12 of Webster**).*

*With regard to **Claim 37**, Chen et al. and Webster disclose the image capturing method of claim 23, wherein none of the plurality of image sensors includes a computer readable memory (Figure 2 of Chen et al. shows no memory present on the lens modules).*

*Regarding **Claim 38**, Chen et al. and Webster disclose the image capturing method of claim 23, wherein an integrated circuit comprises the plurality of digital image sensors (The image sensors and processor 270 are mounted on the same integrated circuit chip 299, **Column 5, Lines 18-20 of Chen et al.**).*

**Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) and Webster (US Patent No.: 6791076B2) as applied to claim 1 above and further in view of Glassman et al. (US Patent No.: 5920337)**

*With regard to **Claim 2**, Chen et al. and Webster disclose the system of claim 1, further comprising a support having an exterior surface that comprises the mounting surface as disclosed above in claim 1. However, Chen et al. and Webster do not disclose that the support has a generally spherical geometry. Glassman et al. teach of multiple sensors on a mounting surface (60 which is fabricated on an IC in Figure 10 of*

*Glassman et al.) that has a generally spherical geometry (Column 10, Line 63 to Column 11; Line 3 and Figure 10 of Glassman et al.). It would have been obvious and well-known to one of ordinary skill in the art to incorporate a spherical shaped mounting surface into the design disclosed by Chen et al. and Webster, because this enables the system to obtain a three hundred and sixty degree panoramic view of a scene to be imaged, **Column 2, Lines 58 to 59 of Glassman et al.***

**Claims 28-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) and Webster (US Patent No.: 6791076B2) as applied to claim 23 above and further in view of Mates (US Patent No.: 6987258B2)**

*With regard to **Claim 28**, Chen et al. and Webster disclose the method of claim 23, further comprising:*

*correlating the first view to a first image sensor of the plurality of sensors and the second view to a second image sensor of the plurality of image sensors (**Column 9, Lines 39 et seq.**); and*

*However, Chen et al. and Webster do not explicitly disclose receiving a directional identification signal indicating that the first view contains a desired scene activity. Mates discloses an image capture system (**Figure 2 of Mates**) that has a plurality of photodetector elements, lenses and a processing engine incorporated on an integrated circuit, **Column 2, Line 56 to Column 4, Line 35 of Mates**. Mates also*

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*discloses that the system can be used to track objects and for monitoring processes (detection of activity in a scene), **Column 7, Lines 8-17 of Mates**. It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to enable the system disclosed by Chen et al. and Webster et al. detect activity in a scene as taught by Mates because this enables the system to be used as a security system or a teleconferencing system in which selected users can be tracked.*

*Regarding **Claim 29**, Chen et al. and Webster disclose the method of claim 23, further comprising:*

*performing an image signal processing function on the information (Video processor 270 is capable of performing an image processing function, **Figure 2 and Column 5, Lines 11-14**).*

*However, Chen et al. and Webster do not disclose outputting the post processed image signal information. Mates discloses an image capture system (Figure 2 of Mates) that has a plurality of photodetector elements, lenses and a processing engine incorporated on an integrated circuit, **Column 2, Line 56 to Column 4, Line 35 of Mates**. The output circuitry 207 (processing engine) is coupled to a display, **Column 6, Lines 45-46 of Mates**. It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to output the processed image on a display, because this can be used to share images for people to view.*

*Regarding **Claim 31**, Chen et al., Webster and Mates disclose the method of claim 29 further comprising streaming the post processed signal information (The video images captured by Chen et al. can be streamed when displayed).*

**Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2) and Webster (US Patent No.: 6791076B2) as applied to claim 1 above and further in view of Mates (US Patent No.: 6987258B2) and Foote et al. (US Patent No.: 7015954B1)**

*In regard to **Claim 7**, Chen et al. and Webster et al. disclose the system of claim 1, wherein the first image sensor lens module has an orientation and the second image sensor lens module has a different orientation (Each of the cameras in Figure 2 of Chen et al. capture a different portion of an image), the system further comprising:*

*a triggering engine communicatively coupled to the selector and operable to evaluate scene view information to identify an image sensor module capturing desired information and signal the selector to route a specific portion of the scene view information captured by the identified image sensor module to the processing engine (Each camera can evaluate a different depth plane and the processor 270 identifies which camera is performing a specific function and acquiring specific information,*

**Figure 4 to 5B; Column 8, Lines 1 et seq. of Chen et al.** The video processor 270 generates the final image from the plurality of virtual images attained using individual cameras that capture an image at different depths, **Column 8, Lines 1 et seq. of Chen et al.**).

However, *Chen et al.* and *Webster et al.* do not disclose a directional determination assembly operable to detect a direction of an activity in the scene, the assembly further operable to output a signal that informs the triggering engine of the direction. *Mates* discloses an image capture system (**Figure 2 of Mates**) that has a plurality of photodetector elements, lenses and a processing engine incorporated on an integrated circuit, **Column 2, Line 56 to Column 4, Line 35 of Mates**. *Mates* also discloses that the system can be used to track objects and for monitoring processes (detection of activity in a scene), **Column 7, Lines 8-17 of Mates**. It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to enable the system disclosed by *Chen et al.* and *Webster et al.* detect activity in a scene as taught by *Mates* because this enables the system to be used as a security system or a teleconferencing system in which selected users can be tracked.

*Chen et al.*, *Webster et al.* and *Mates* disclose that the system has a triggering engine that is operable to evaluate scene view information to identify an image sensor module capturing desired information and signal the selector to route a specific portion of the scene view information captured by the identified image sensor module to the processing engine as disclosed above. However, the references separate or in

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*combination do not explicitly disclose that the triggering engine is capable of being informed of the direction of an activity. Foote et al. disclose an array of cameras (Figure 1 of Foote et al.) that are used for motion detection. A motion sensor functions as a triggering engine that detects motion in a particular area and selects the appropriate camera to capture information from the location, **Column 12, Lines 1 et seq. of Foote et al.** This information is then input to the combining device (processing engine), **Column 18, Lines 15-18 of Foote et al.** The camera array motion sensor detects the motion in a particular region (determined direction). Upon detecting a motion in a particular region, a signal (information) is sent to point another camera in the appropriate direction, **Column 12, Lines 22-32 of Foote et al.** It would have been obvious and well-known to one of ordinary skill in the art at the time of the invention to enable the triggering engine disclosed in Chen et al. to be able to receive information on the direction of an activity similar to the triggering engine disclosed by Foote et al., because this enables the system to automatically steer a respective camera to the person speaking, **Column 3, Lines 59-61 of Foote et al.***

*In regard to **Claim 8**, Chen et al., Webster et al., Mates and Foote et al. disclose the system of claim 7, wherein the triggering engine is further operable to signal the selector to route the second information to the processing engine in response to a determination that the second view should capture the activity (The camera array motion sensor detects the motion (activity) in a particular region (determined direction). Upon detecting a motion in a particular region, a signal (information) is sent to point a*

*second camera in the appropriate direction, **Column 12, Lines 22-32 of Foote et al.***  
*Images from the camera array are processed in the combining device, **Column 18, Lines 14-15 of Foote et al.** If it is determined that only the second view should capture the activity, the other views can be discarded, **Column 6, Lines 27-29 of Foote et al.***  
*The view selection device may select only part of the combined image (second image part) for display, **Column 18, Lines 20-21 of Foote et al.***

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No.: 7425984B2), Webster (US Patent No.: 6791076B2), Mates (US Patent No.: 6987258B2) and Foote et al. (US Patent No.: 7015954B1) as applied to claims 1 and 7-8 above , and further in view of Glassman et al. (US Patent No.: 5920337).**

*In regard to **Claim 9**, Chen et al., Webster et al., Mates and Foote et al. disclose multiple cameras (Figure 2 of Chen et al.) capable of capturing different images. Chen et al. also disclose an interface operable to communicatively couple an output to an external computing system (**Figures 1-2 and Column 4, Line 32 to Column 5, Line 58 of Chen et al.**).*

*However, Chen et al., Webster et al., Mates and Foote et al. do not explicitly disclose the system of claim 8 further comprising: a support having an exterior surface that comprises the mounting surface, the support having a geometry that facilitates*



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*differing orientations of the first and the second image sensor lens modules; and an interface operable to communicatively couple an output of the processing engine to an external computing system.*

*Glassman et al. teach of multiple sensors on a mounting surface (60 which is fabricated on an IC in Figure 10 of Glassman et al.) that has a generally spherical geometry (Column 10, Line 63 to Column 11; Line 3 and Figure 10 of Glassman et al.). The system has a support having an exterior surface that comprises the mounting surface, the support having a geometry that facilitates differing orientations of the first and the second image sensor lens modules (Figure 10 of Glassman et al. show that the support has a geometry that facilitates differing orientations of the image sensor modules); and an interface operable to communicatively couple an output of the processing engine to an external computing system (Processed images can be sent to a computer, **Column 4, Lines 62-63 of Glassman et al.**).*

*It would have been obvious and well-known to one of ordinary skill in the art to incorporate a spherical shaped mounting surface into the design disclosed by Chen et al. and Webster, because this enables the system to obtain a three hundred and sixty degree panoramic view of a scene to be imaged, **Column 2, Lines 58 to 59 of Glassman et al.** It would have further been obvious to couple an output of the processing engine to an external computing system, because this would have enabled the freeing up of space in the camera and increasing its present memory capacity.*

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRITHAM PRABHAKHER whose telephone number is (571)270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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